



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/325,119	06/03/1999	PHILIP P. CARVEY	AVI99-02	2433

21005 7590 01/29/2003

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.  
530 VIRGINIA ROAD  
P.O. BOX 9133  
CONCORD, MA 01742-9133

EXAMINER

SINGH, DALZID E

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/325,119	CARVEY ET AL.
	Examiner	Art Unit
	Dalzid Singh	2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 19 November 2002.
- 2a) This action is **FINAL**.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.
- 4) Claim(s) 1-8, 11-20 and 23-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-8, 11-20 and 23-25 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)            | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. . | 6) <input type="checkbox"/> Other: _____ .                                   |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 11-17 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haas (US Patent No. 5,469,284).

Regarding claims 1, 13 and 25, Haas discloses optical packet switch as shown in Fig. 3 comprising:

a plurality of optical inputs and output (as shown in Fig. 3, the switch (18) comprises plurality of input (20) and output (on the other side of the switch, not shown));  
a plurality of reordering units (i.e., scheduling stage, see col. 2, lines 42-48 and col. 3, lines 16-62) that rearrange the order of data units within data streams.

Haas discloses that optical switch operate with a schedule (as shown in Fig. 3) and differs from these claims in that Haas do not specifically disclose that the switch operates with a schedule is not directly determined by the input stream. However, shown in Fig. 3, since the input streams are received by the scheduling stage (18) prior of entering the switch, therefore the operation of the switch is not directly determined by the input streams. The advantage of operating the switch with schedule (scheduling stage) is to prevent collisions of input streams at the input of the switch. the schedule (16) is in between the input streams and the switch (18), therefore

Regarding claims 2, 5, 14 and 17, the switch of Haas as disclosed above performs switching function wherein a plurality of inputs is connected to a plurality of outputs. It would have been obvious to call the switch of Haas as a crossbar or multi-stage interconnection since these switches have the same functionality, which is to transfer a plurality of data signal from various points (sources) of the input to various points (destination) of the output in order to correctly route data signals from source to destination.

Regarding claims 3, 4, 15 and 16, as shown in Fig. 3, Haas shows input buffer and output buffer (preprocessing), since both the input buffer and output buffer are the same, therefore the input and output data are reorganized in order to avoid collision of data signals.

Regarding claims 11 and 23, Haas discloses a controller (30), which receives status of information to schedule transmission of cells.

Regarding claims 12 and 24, Haas discloses buffer modules (registers, see col. 6, lines 64-67 to col. 7, lines 1-3), and further discloses a controller which set up connection to schedule transmission of data cells (see col. 6, lines 25-35) to the switch.

3. Claims 6-8 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haas (US Patent No. 5,469,284) in view of Shively (US Patent No. 5,978,370).

Regarding claims 6 and 18, Haas differs from these claims in that the Haas does not specifically called the reordering unit (scheduling stage) as a time-slot interchanger. The reordering units (i.e., the scheduling stage) of Haas reorganize data signals or cell.

However, Shively teaches the use of time-slot interchanger (see col. 9, lines 9-30). Since the use of time-a lot interchanger is well known, as evidenced by Shively, therefore it would have been obvious to an artisan of ordinary skill in the art to provide a time-slot interchanger in order to synchronize and adjust the timing of the data cell and the switch.

Regarding claims 7 and 19, since the system of Haas comprises sequential scanning techniques (see col. 3, line 65), therefore the first input will be the first output (FIFO).

Regarding claims 8 and 20, Haas differs from this claim in that Haas does not specifically disclose buffers in dual port memory. However, data packets are stored in memory (buffer) before being process, therefore it would have been obvious to provide a dual port memory in order to access the stored data faster.

#### ***Response to Arguments***

4. Applicant's arguments with respect to claims 1, 6-8, 11-13, 18-20 and 23-25 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is 703-306-5619. The examiner can normally be reached on Mon-Fri 8am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703-305-4729. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

DS  
January 25, 2003

*leslie pascal*  
LESLIE PASCAL  
PRIMARY EXAMINER